5 НС Y1CY, M.M.

ARABADZHYAN, A.Z., kand.ekon.nauk; BADI, Sh.M., kand.ekon.nauk; BAROYAN, O.V., doktor med.nauk; BASHKIROV, A.V., kand.ekon.nauk; BUSHEV, P.P., kand. ist.nauk; GLUKHODED, V.S.; DOROFEYEVA, L.N., kand.filol.nauk; DOROSHENKO, Ye.A., kand.ist.nauk; ZAVISTOVICH, A.A.; IVANOVA, M.N., kand. ist.nauk; IVANOV, M.S., doktor ist.nauk; IL'INSKIY, G.N., kand.ist. nauk; KISLYAKOV, N.A., doktor ist.nauk; KOMISSAROV, D.S., kand.filol. nauk; KURDOYEV, K.K., kand.filol.nauk; MOISEYEV, P.P., kand.ekon. nauk; PAKHALINA, T.N., kand.filol.nauk; PETROV, M.P., doktor geograficheskikh nauk, prof.; PETROV, G.M., kand.ist.nauk; SOKOLOVA, V.S., doktor filol.nauk; TRUBETSKOY, V.V.; FARKHADIYAN, A.I., kand.ist. nauk; SHOYTOV, A.M., kand.filol.nauk; ZAKHODER, B.N., doktor istoricheskikh nauk, prof. , otvetstvennyy red.; AKHRAMOVICH, R.T., kand. ist.nauk, red.; FALINA, A.I., kand.ist.nauk, red.; KUZNETSOVA, N.A., red. izd-va; SHVEYKOVSKAYA, V.R., red. izd-va; PRUSAKOVA, T.A., tekhn. red.

[Present-day Iran; a manual] Sovremennyi Iran; spravochnik. Moskva, 1957. 715 p. (MIRA 11:2)

1. Akademiya nauk SSSR. Institut vostokovedeniya. (Iran)

SHOYVANOV, V.Zh.

Field and laboratory interpretation. Geod. i kart. no.1:37-38 Ja '64. (MIRA 17:9)

SHOYVANOV, V.Zh.

Organization and methodology of work in the field of the interpretation of aerial photographs taken in reconnaissance surveying.
Geod. i kart. no.10:25-31 O '64. (MIRA 18:2)

ROZENTRETER, B.A.; SHPAAK, G.V.

"Determining the face length by the ventilation factor" by S.M. Lipkovich, K.F. Sapitskii, Reviewed by B.A.Rozentreter, G.V. Shpaak. Ugol' Ukr. 2 no.2:41 F '58.
(MIRA 13:3)

1. Institut gornogo dela AN SSSR.
(Mine ventilation)

BAGRINOVSKIY, A.D., inzh.; ZUBOV, R.V., inzh.; SHPAAK, G.V., inzh.

Electric model used in designing mine ventilation systems.
Bezop. truda v prom. 3 no.2:23-25 F '59. (MIRA 12:2)

1. Institut gornogo dela AN SSSR.
(Mine ventilation)

SHPAAK, G.V., gornyy inzh.

Electric modeling of the thermal depression during underground mine fires ("Investigation of mine ventilation conditions during fires by means of electric models" by I.V.Voskoboinikov. Reviewed by G.V.Shpaak). Ugol' Ukr. 4 no.2:42 F '60.
(MIRA 13:6)

(Thermodynamics--Electromechanical analogies)
(Coal mines and mining--Fires and fire prevention)
(Voskoboinikov, I.V.)

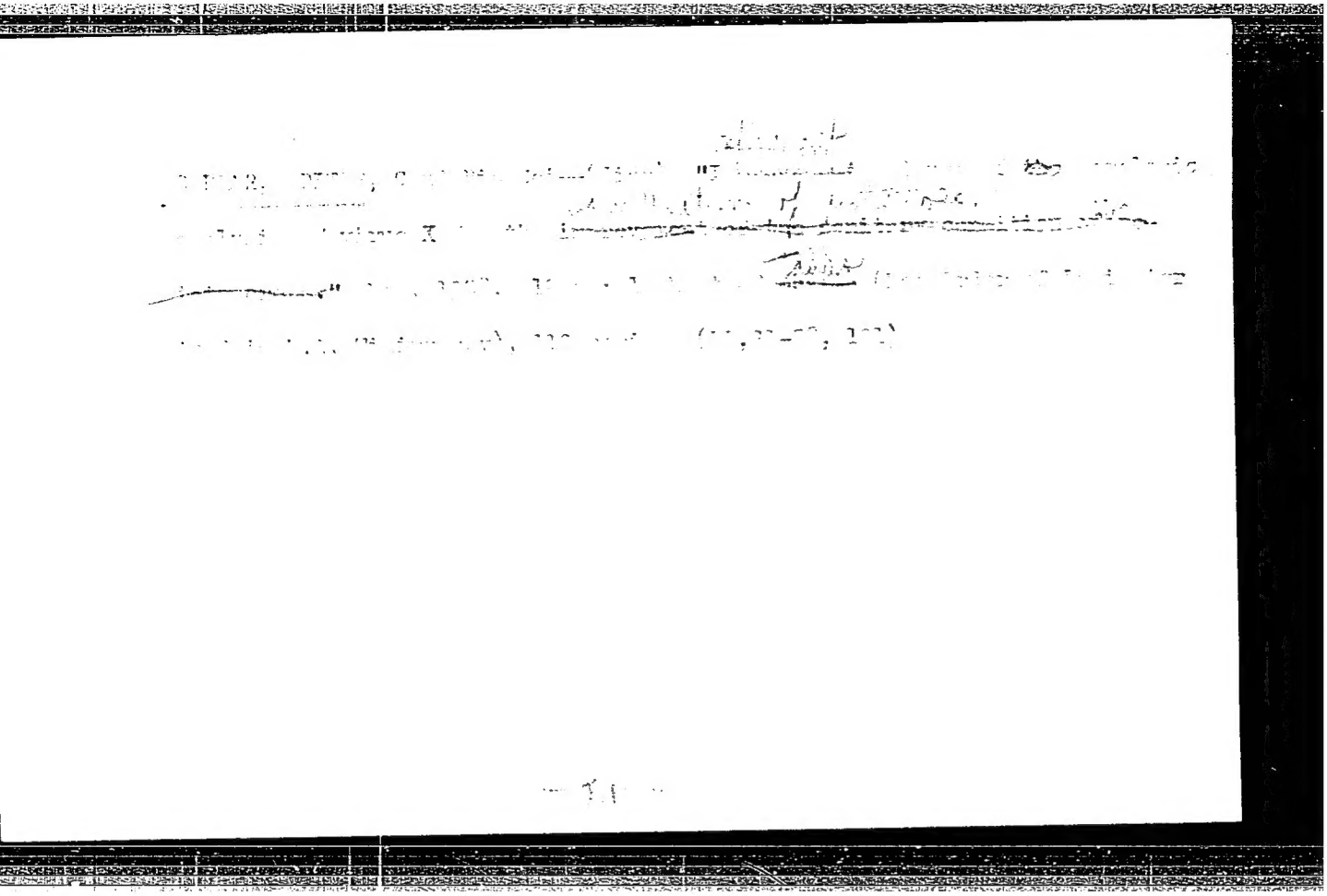
SHPAAK, G.V.

Effect of natural pull on the operation of main mine fans.
Nauch. soob. IGD 12:173-183 '61. (MIRA 15:9)
(Fans, Mechanical--Electromechanical analogies)

SHPAAK, G.V.

Joint operation of fans and natural pull. Ugol' 38 no.9:50-53 S '63. (MIRA 16:11)

1. Institut gornogo dela im. A.A. Skochinskogo.



SHPACHEK, A.

2

Špaček, Antonín. Zufällige Mengenfunktionen. Math. Nachr. 14 (1955), 355–360 (1956).

Let $(X, \mathfrak{S}, \nu)$ be a probability space, and let F be the set of all real-valued functions on $\mathfrak{S}$. Let $\mathfrak{F}$ be the least σ-algebra of subsets of F such that for each A in $\mathfrak{S}$ the function $\varphi \to \varphi(A)$ on F is measurable with respect to $\mathfrak{F}$. If μ is a probability measure on $\mathfrak{F}$, then $(F, \mathfrak{F}, \mu)$ is called a random setfunction. The author studies conditions under which this random setfunction is absolutely continuous, i.e., the subset W of F consisting of the probability measures on $\mathfrak{S}$ that are absolutely continuous with respect to ν has outer measure 1 with respect to μ. In case the random measure is absolutely continuous, the author defines its Radon-Nikodym derivative and proves that in a special case (Borel measures in separable metric spaces) the derivative is a random function, i.e., for each fixed φ in W it is a measurable function on X.

P. R. Halmos (Chicago, Ill.).

Math 1-F\W

MT

SHPACHEK, B. (Chekhoslovakiya)

Surgical treatment of a chronic aneurysm of the heart after an infarct
Klin.med. 34 no.9:30-34 S '56. (MIRA 9:11)

1. Iz Instituta klinicheskoy i eksperimental'noy khirurgii (Praga-Krch)

(HEART, aneurysm
caused by myocardial infarct, surg.)
(MYOCARDIAL INFARCT, compl.
cardiac aneurysm, surg.)

DOLEZHALOVA, Ya.; MRKVICHKA, Ya.; SHPACHEK, L.; VESELY, V.

Theoretical studv of the cause of rail corrugation. Vest. TSNII MPS 17[i.e. 19] no.7:17-21 '60. (MIRA 13:11)

1. Institut inzhenerov zheleznodorozhnogo transporta, Praga.
(Railroads--Rails)

S/262/62/000/012/002/013
I007/I207

AUTHOR: Yyeriye Yan, Shpachek, L.

TITLE: Design of the steam path in steam turbines

PERIODICAL: Referativnyy zhurnal, otdel'nyy vypusk, 42. Silovyye ustanovki, no. 12, 1962, 28, abstract 42.12.164. "Chekhosl. tyazhelaya prom-st' ", no. 1, 1962, 5–14

TEXT: This is a survey based on 15 sources. The theory of flow around the blade cascade is outlined, and test results are reported. A catalogue is drawn up for small Mach-number bladings designed according to the Shpachek and Ruzhichka method, and the basic principles of this method are outlined. There are 10 figures and 15 references.

[Abstracter's note: Complete translation.]

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Card 1/1

SHPACHENKO, N.; MAKSIMOV, A., agronom-ekonomist

We'll reach the new goals in the coming year. Nauka i pered.op. v sel'khoz. 9 no.12:5-6 D '59. (MIRA 13:4)

1.Glavnyy agronom sovkhoza "Dneprovskiy," Kamensko-Dneprovskogo rayona, Zaporozhskoy oblasti.
(Kamenka-Dneprovskaya District--State farms)

SHPAKOV, V.

For a perfect project. NTO 7 no.3:31-32 Mr '65.

(MIRA 18:5)

1. Uchenyy sekretar' Ul'yanovskogo oblastnogo soveta nauchno-tekhnicheskikh obshchestv.

SHPADI, R.V., inzhener.

Snowproof roads. Avt.dor. 18 no.1:26 Ja-F '55. (MIRA 8:4)
(Roads) (Snow removal)

SHPADI,R.V., inzhener

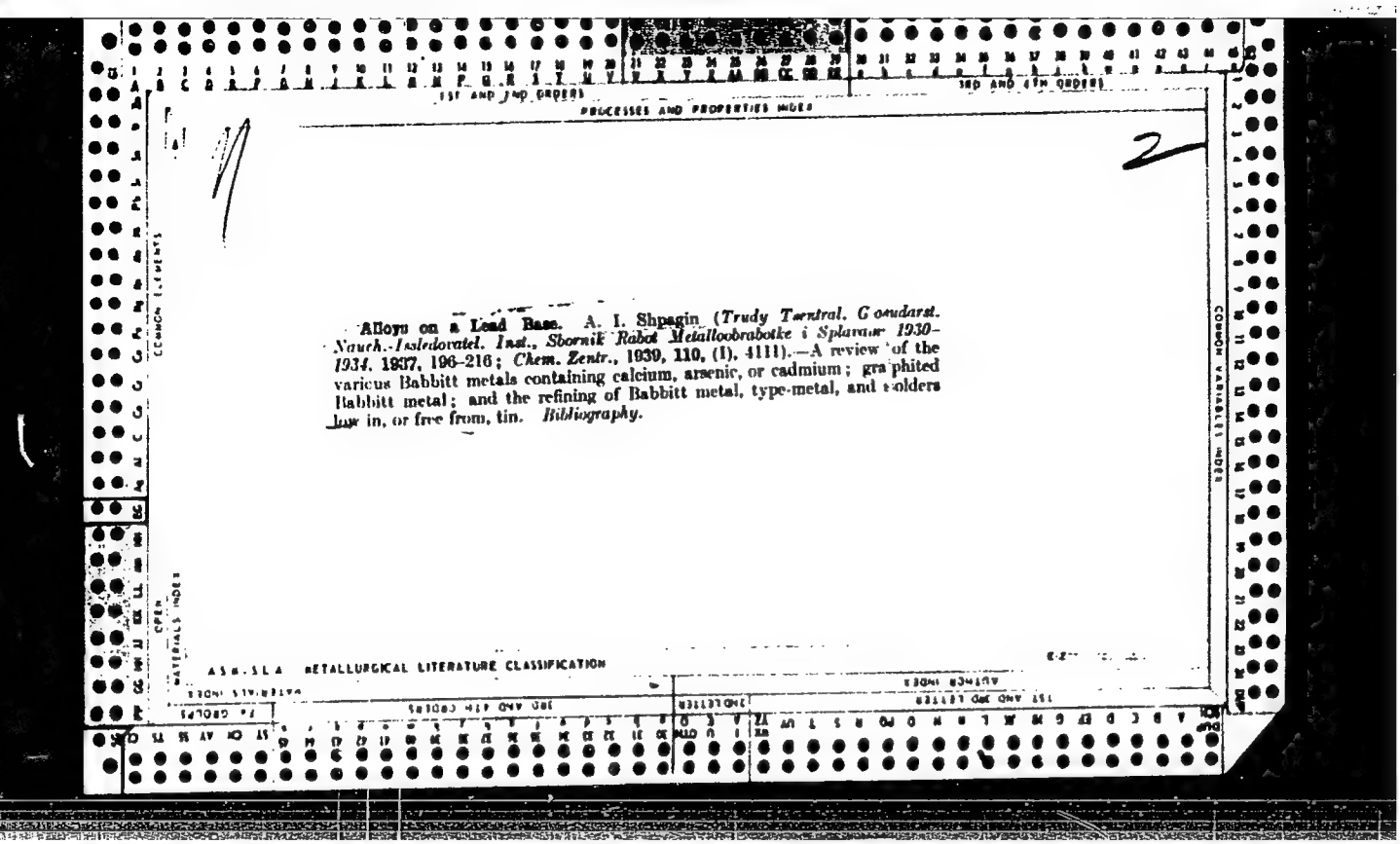
Organizing the construction of local and republic highways. Avt. dor.18 no.5:31 S'55. (MLRA 9:1)
(Road construction)

GRECHUSHNIKOV, N.I., inzhener; ZAKHAROV, S.V., retsenzent; SHPAGIN, A.A., nauchnyy redaktor.

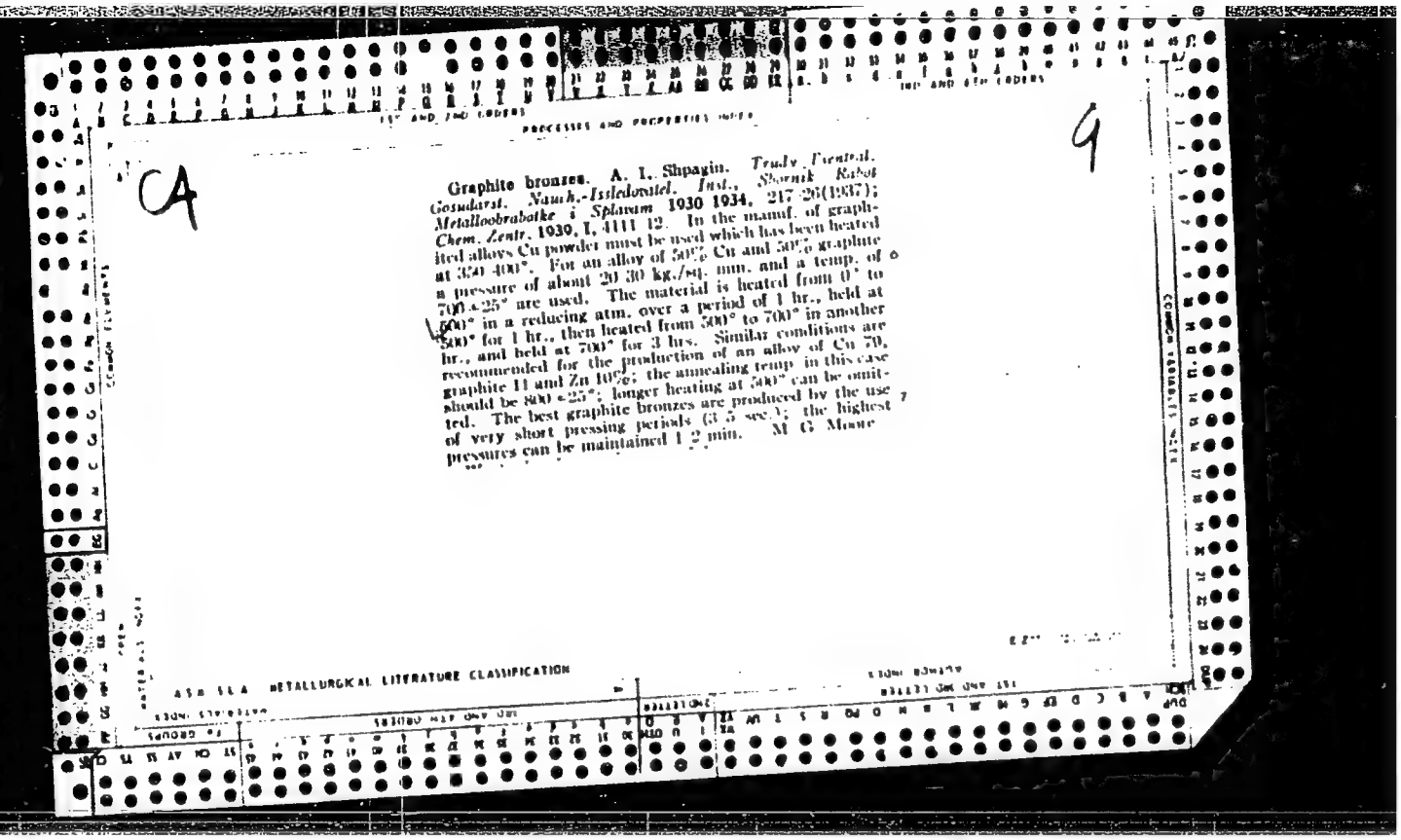
[Joinery on ships] Sudovye stoliarnye raboty. Leningrad, Gos. nauchno-tekhn. izd-vo mashinostroit. i sudostroit. lit-ry [Leningradskoe otd-nie] 1954. 158 p. (MLRA 7:7)
(Joinery)

SHEDLING, Feliks Maksimilianovich; SHRAGIN, A.A., otv.red.; VLASOVA, Z.V., red.; FEUMKIN, P.S., tekhn.red.

[How to build a canoe, a rowboat, and a centerboard boat] Kak postroit' baidarku, shliupku i shvertbot. Leningrad, Gos. soiuznoe izd-vo sudostroit. promyshl., 1958. 178 p. (MIRA 12:2)
(Canoes and canoeing) (Boatbuilding)



Alloys on a Lead Base. A. I. Shpagin (*Trudy Tsentral. Gosudarst. Nauch.-Issledovatel. Inst., Sbornik Rabot Metalloobrabotke i Splavam 1930–1934*, 1937, 196–216; *Chem. Zentr.*, 1939, **110**, (I), 4111).—A review of the various Babbitt metals containing calcium, arsenic, or cadmium; graphited Babbitt metal; and the refining of Babbitt metal, type-metal, and solders low in, or free from, tin. *Bibliography.*

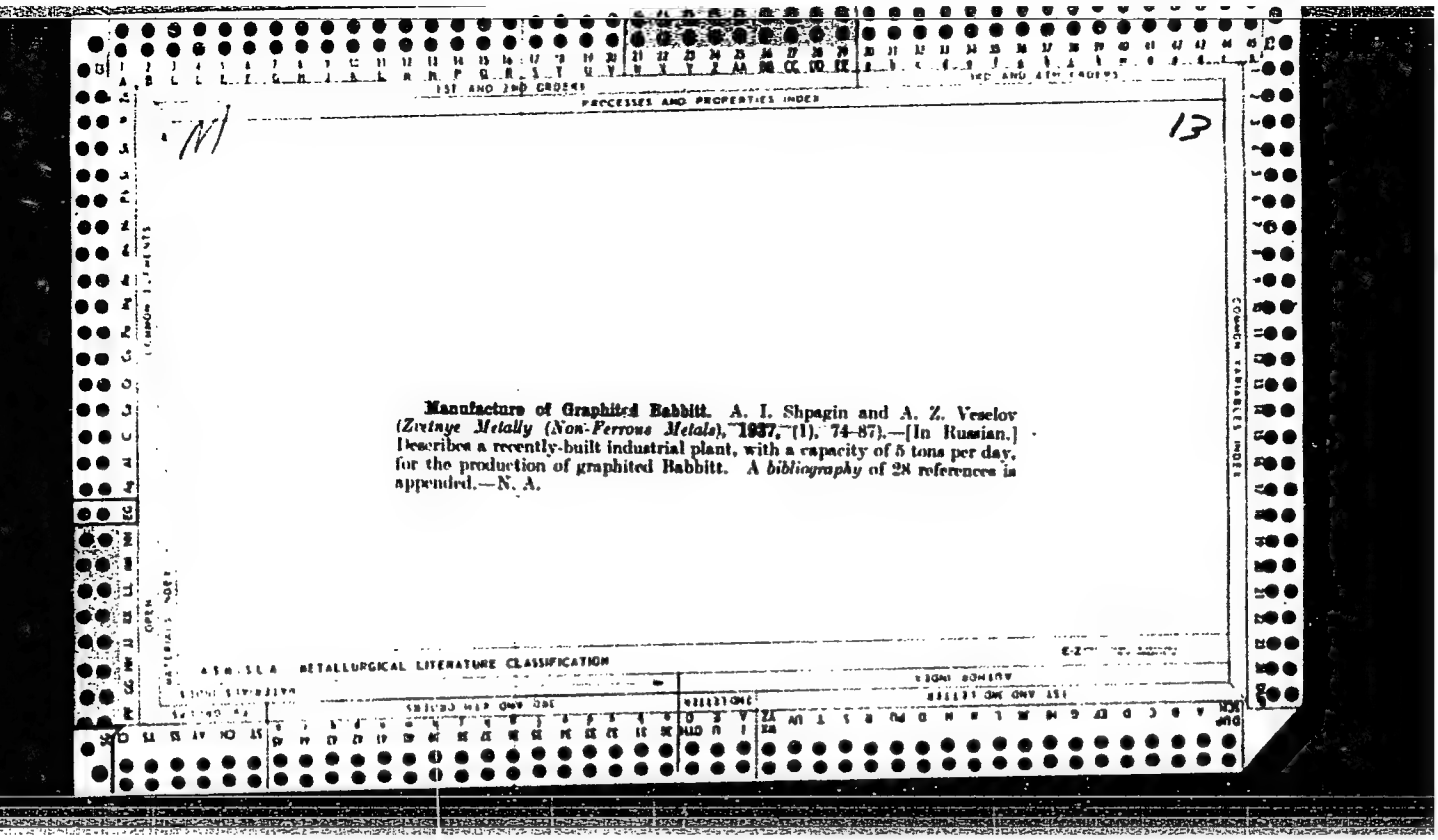


CA

9

Graphite bronzes. A. I. Shpagin. *Trudy Tsentral. Gosudarst. Nauch.-Issledovatel. Inst., Sbornik Rabot Metalloobrabotke i Splavam* **1930** 1934, 217-26(1937); *Chem. Zentr.* 1930, I, 4111-12. In the manuf. of graphited alloys Cu powder must be used which has been heated at 350-400°. For an alloy of 50% Cu and 50% graphite a pressure of about 20-30 kg./sq. mm. and a temp. of 700 ± 25° are used. The material is heated from 0° to 500° in a reducing atm. over a period of 1 hr., held at 500° for 1 hr., then heated from 500° to 700° in another hr., and held at 700° for 3 hrs. Similar conditions are recommended for the production of an alloy of Cu 70, graphite 11 and Zn 10%; the annealing temp. in this case should be 800 ± 25°; longer heating at 500° can be omitted. The best graphite bronzes are produced by the use of very short pressing periods (3-5 sec.); the highest pressures can be maintained 1-2 min. M. G. Mosne

ASM SLA METALLURGICAL LITERATURE CLASSIFICATION



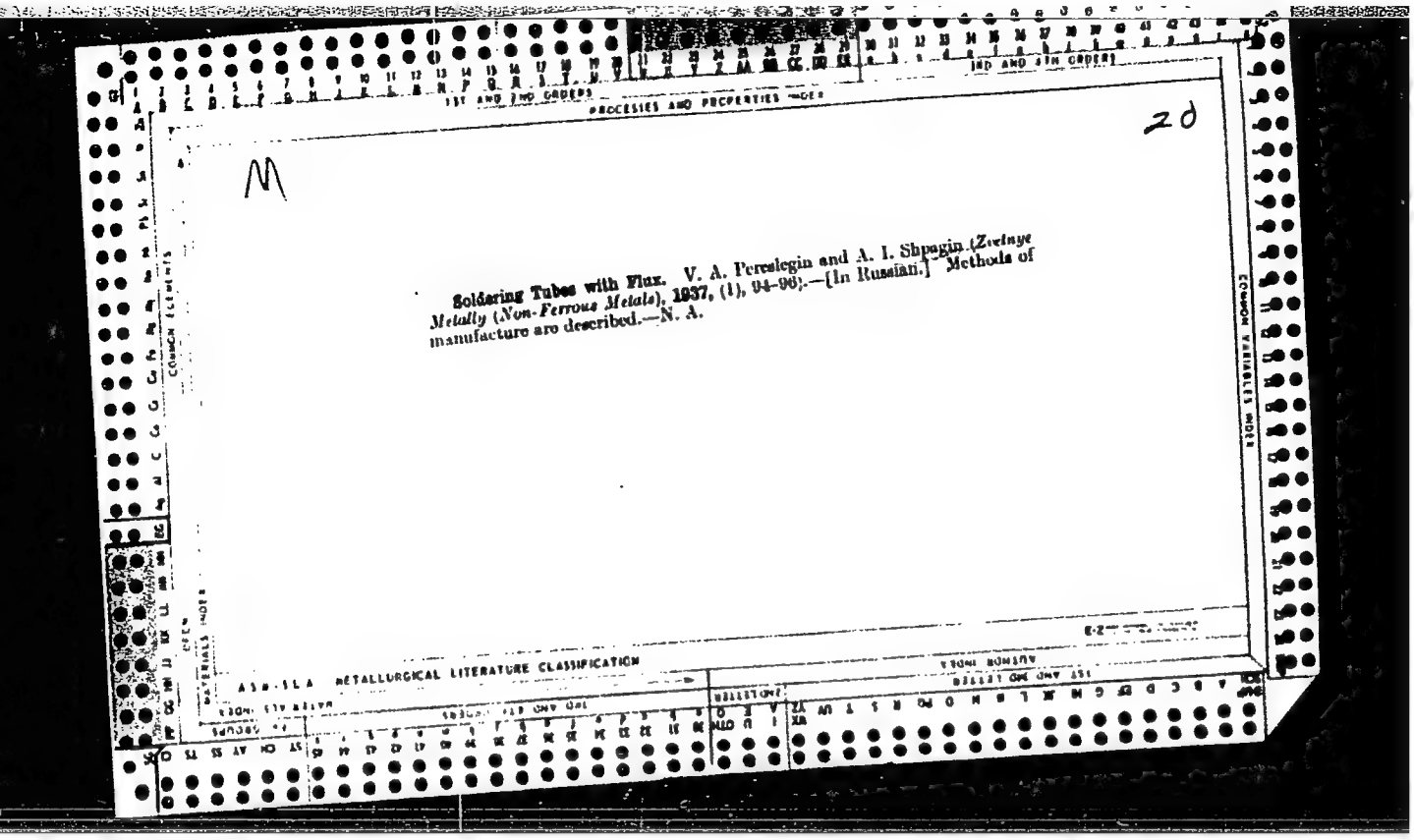
PROCESSES AND PROPERTIES INDEX

M

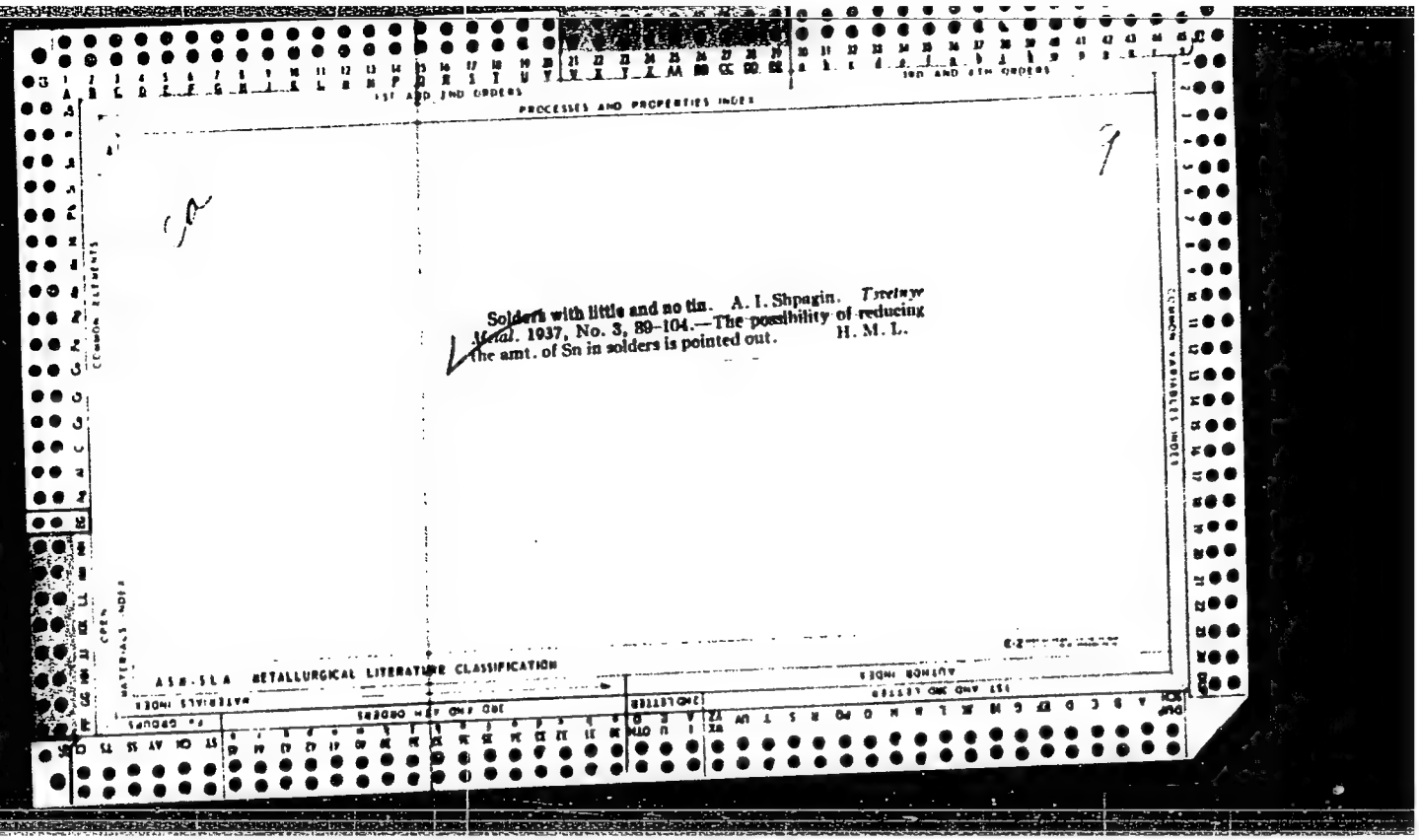
13

Manufacture of Graphited Babbitt. A. I. Shpagin and A. Z. Veselov (*Zvetnye Metally (Non-Ferrous Metals)*, 1937, (1), 74–87).—[In Russian.] Describes a recently-built industrial plant, with a capacity of 5 tons per day, for the production of graphited Babbitt. A *bibliography* of 28 references is appended.—N. A.

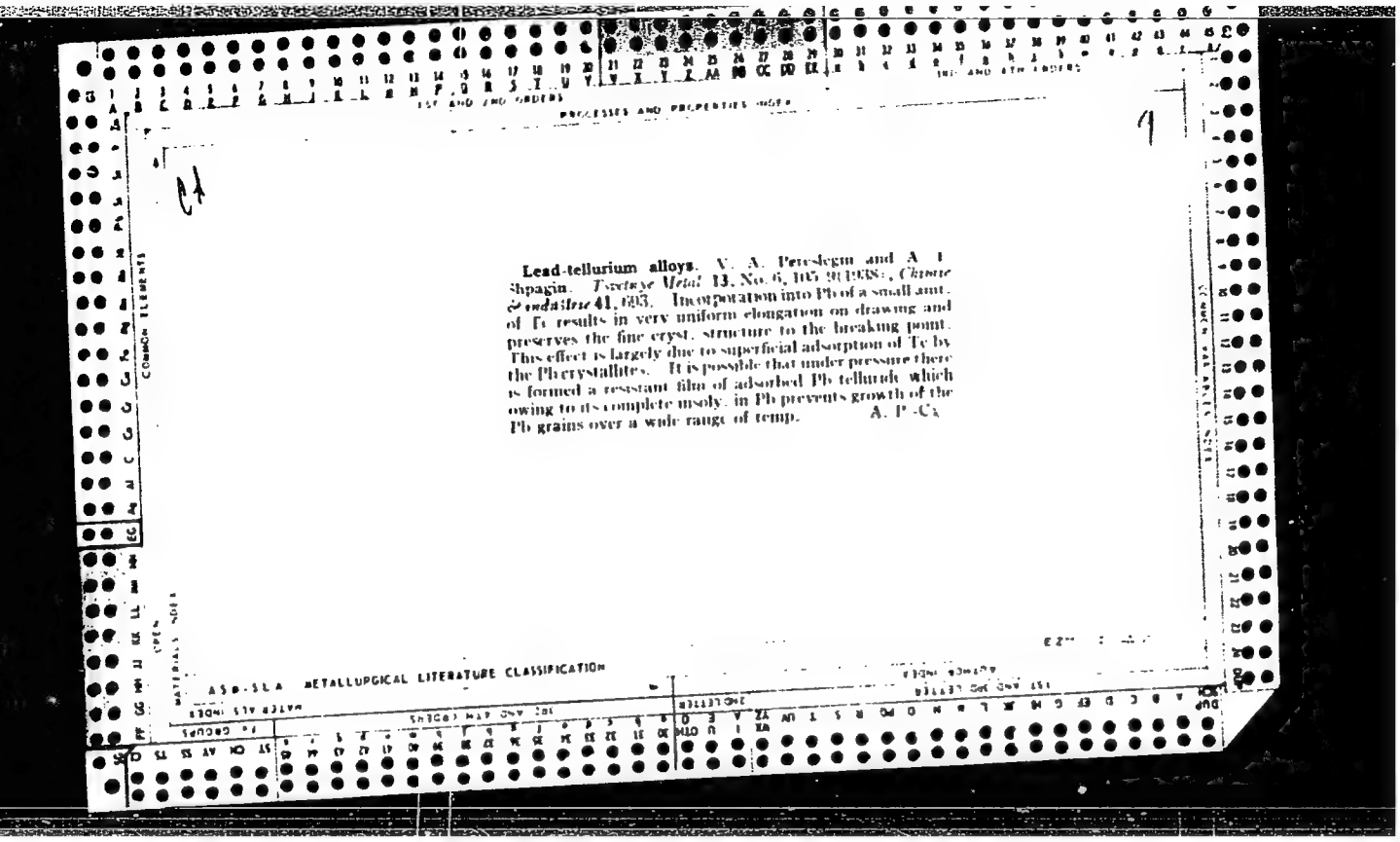
ASM-SLA METALLURGICAL LITERATURE CLASSIFICATION



Soldering Tubes with Flux. V. A. Pereslegin and A. I. Shpegin (*Tsvetnye Metally* (*Non-Ferrous Metals*), **1937**, (1), 94-96).—[In Russian.] Methods of manufacture are described.—N. A.



Solders with little and no tin. A. I. Shpagin. *Tsvetnye Metal.* 1937, No. 3, 89–104.—The possibility of reducing the amt. of Sn in solders is pointed out. H. M. L.



Lead-tellurium alloys. V. A. Persegin and A. I. Shpagin. *Tsvetnye Metal.* 13, No. 6, 105-9(1938); *Chimie & industrie* 41, 693. Incorporation into Pb of a small amt. of Te results in very uniform elongation on drawing and preserves the fine cryst. structure to the breaking point. This effect is largely due to superficial adsorption of Te by the Pb crystallites. It is possible that under pressure there is formed a resistant film of adsorbed Pb telluride which owing to its complete insoly. in Pb prevents growth of the Pb grains over a wide range of temp. A. P.-Ca

SHIAGIN, A. I. Cand. Tech. Sci.

Dissertation: "Solders on the Lead-Tin Base and Their Substitutes." Moscow Inst of Nonferrous Metals and Gold imeni M. I. Kalinin, 8 Dec 47.

SO: Vechernyaya Moskva, Dec, 1947 (Project #17836)

M. A.

Alloys with a Silver-Palladium Base for Oral Orthopedy. M. S. Lipets and A. I. Shpagin (Stomatologiya, 1948, (4),54-55; C. Abs., 1950, 44, 2432). (In Russian). The most satisfactory dental alloys consist of silver 62-64, palladium 28-30, gold 4-5, and copper 2%. The m.p. is about 1200°C., the Brinell hardness 62, and the other mechanical properties approach those of the usual gold alloys. No darkening with H_2S or solubility in mouth acids could be detected, and welding is readily carried out.

SHPAGIN, Aleksey Ivanovich; VINOGRADOV, S.V., inzhener, retsenzent; LAKEDEMONSKIY, A.V., inzhener, retsenzent; EL'KIND, L.M., redaktor izdatel'stva; MIKHAYLOVA, V.V., tekhnicheskiy redaktor

[Antifriction alloys] Antifriktsionnye splavy. Moskva, Gos. nauchno-tekhn. izd-vo lit-ry po chernoi i tsvetnoi metallurgii, 1956. 320 p. (Alloys) (MLRA 9:11)

SHPAGIN, A.I.

137-58-5-10686

Translation from: Referativnyy zhurnal, Metallurgiya, 1958, Nr 5. p 259 (USSR)

AUTHORS: Shpagin, A.I., Tutorskaya, N.N.

TITLE: Replacement of Tin Bronze by Ferrous Metals in Sprinkler Manufacture (Zamena olovyanistoy bronzy chernymi metallami pri izgotovlenii sprinklerov)

PERIODICAL: Byul. tsvetn. metallurgii, 1957, Nr 18, pp 26-28

ABSTRACT: A new sprinkler design is suggested, the parts of which may be made of St 2 steel instead of expensive tin bronze. The sprinkler housing is made by drop forging with subsequent application of protective coatings.

I.B.

1. Sprinklers--Design 2. Metals--Effectiveness

Card 1/1

LAKEDEMONSKIY, Anatoliy Vladimirovich, KHRYAPIN, Vladimir Yemel'yanovich,; SHPAGIN, A.I., kand. tekhn. nauk, retsenzent,; DUBINSKIY, S.A.,retsenzent; BABICHEV, V.Z., inzh., retsenzent,; CHERNOV, A.N., red.; KURDOVA, Ye.I., red. izd-va,; KARASEV, A.I., tekhn. red.

[Soldering and solders] Paianie i pripoi. Moskva, Gos. nauchno-tekhn. izd-vo lit-ry chernoi i tsvetnoi metallurgii, 1958. 229 p. (MIRA 11:11)

(Solder and soldering)

LAKEDEMONSKIY, A.V.; KHRYAPIN, V.Ye.; SHPAGIN, A.I., kand.tekhn.nauk, retsenzent; RYBAKOVA, V.I., inzh., red.; UVAROVA, A.F., tekhn.red.

[Solderer's handbook] Spravochnik paial'shchika. Moskva, Gos. nauchno-tekhn.izd-vo mashinostroit.lit-ry, 1959. 352 p. (MIRA 12:9)

(Solder and soldering)

BAL'SHIN, M.Yu., kand.tekhn.nauk; VINOGRADOV, S.V., inzh.; GLAZUNOV, S.G., kand.tekhn.nauk; ZELIKMAN, A.N., kand.khim.nauk; KISLYAKOV, I.P., kand.tekhn.nauk; KURITSYNA, A.D., kand.tekhn.nauk; LEBEDEV, A.A., A.A., inzh.; LUZHNIKOV, L.P., kand.tekhn.nauk; POMERANTSEV, S.N., inzh.; RUDNITSKIY, A.A., doktor khim.nauk; SMIRYAGIN, A.P., kand. tekhn.nauk; TRET'YAKOV, V.I., kand.tekhn.nauk; CHURSIN, V.M., kand.tekhn.nauk; CHUKHROV, M.V., kand.tekhn.nauk; SHAROV, M.V., kand.tekhn.nauk; SHPAGIN, A.I., kand.tekhn.nauk; SHPICHINETSKIY, Ye.S., kand.tekhn.nauk; POGODIN-ALEKSEYEV, prof., doktor tekhn. nauk, red.; BOCHVAR, M.A., inzh., red.toma; RYBAKOVA, V.I., inzh., red.izd-va; SOKOLOVA, T.F., tekhn.red.; MODEL', B.I., tekhn.red.

[Handbook of materials used in the machinery industry; in four volumes] Spravochnik po mashinostroitel'nym materialam; v chetyrekh tomakh. Pod red. G.I.Pogodina-Alekseeva. Moskva, Gos.nauchno-tekhn.izd-vo mashinostroit.lit-ry. Vol.2. [Nonferrous metals and alloys] TSvetnye metally i ikh splavy. Red.toma M.A.Bochvar. 1959. 639 p. (MIRA 13:1)

(Nonferrous metals) (Nonferrous alloys)
(Machinery industry)

VALETOV, V.V.; VESNIK, M.I.; GONCHAROV, I.S.; DMITROV, D.V.; LUNEV, A.A.; MOKIN, M.I.; NESTEROV, S.N.; SMIRNOV, V.P.; ALEKSEYEV, S.A., retsenzent; KARKAZOV, A.G., retsenzent; KONDRATOVICH, V.M., retsenzent; LEVIN, B.M., retsenzent; MALIKOV, A.N., retsenzent; SEGALEVICH, S.M., retsenzent; SHPAGIN, A.I., retsenzent; SHTERN, L.T., retsenzent; YAKOBI, A.A., retsenzent; TIKHANOV, A.Ya., tekhn. red.; CHERNOVA, Z.I., tekhn. red.

[Establishing norms for the consumption of materials in machinery manufacture; manual] Normirovanie raskhoda materialov v mashinostroenii; spravochnik. Pod red. V.V.Valetova. Moskva, Gos. nauchno-tekhn. izd-vo mashinostroit. lit-ry. Vol.1. 1961. 583 p. (MIRA 15:2)

(Machinery industry)

L 65042-65 EWT(m)/EPF(c)/EWA(d)/EWP(t)/EWP(z)/EWP(b)/ETC(m) IJP(c) JD/MW/DJ

ACCESSION NR: AP5023447 UR/0286/64/000/021/0106/0106

AUTHOR: Shpagin, A. I.; Bushe, N. A.; Abramov, P. G.; Larin, T. V.

TITLE: Bearing alloy / Class 40, No. 87135

SOURCE: Byulleten' izobreteniy i tovarnykh znakov, no. 21, 1964, 106

TOPIC TAGS: antifriction bearing, lead base alloy, sodium containing alloy, magnesium containing alloy, tin containing alloy, antimony alloy, calcium alloy

ABSTRACT: A bearing alloy, consisting of lead with added sodium (0.2-0.6%), calcium (0.2-0.7%) and magnesium (0.1% max), is distinguished in that 1.5-2.5% Sn and 0.5% (max) Sb is added to the initial composition.

ASSOCIATION: none

SUBMITTED: 00 ENCL: 00 SUB CODE: MM, IE

NR REF SOV: 000 OTHER: 000 JPRS

dm
1/1

GULYAYEV, A.S.; SHPAGIN, A.I.

Method of determining the strength of bonding in bimetal strips. Trudy Giprotsvetmetobrabotka no.24:298-306 '65.
(MIRA 18:11)

L 24429-66 EWT(m)/EWP(w)/EWA(d)/EWP(v)/T/EWP(t)/EWP(k) IJP(c) JD/HM
ACC NR: AT6006483 SOURCE CODE: UR/2680/65/000/024/0298/0306

AUTHORS: Gulyayev, A. S.; Shpagin, A. I.

ORG: State Scientific Research and Design Institute of Alloys and Nonferrous Metalworking, Moscow (Gosudarstvennyy nauchno-issledovatel'skiy i proyektnyy institut splavov i obrabotki tsvetnykh metallov)

TITLE: Method for determination of the strength of bonding of bimetallic components

SOURCE: Moscow. Gosudarstvennyy nauchno-issledovatel'skiy i proyektnyy institut splavov i obrabotki tsvetnykh metallov. Trudy, no. 24, 1965. Metallovedeniye i obrabotka tsvetnykh metallov i splavov (Metal science and the treatment of nonferrous metals and alloys), 298-306

TOPIC TAGS: metallurgic testing machine, iron, bimetal/ ASM alloy, BrS30 alloy, TsAM alloy, A-20 alloy, R-5 testing machine, Armco iron

ABSTRACT: It was the object of this investigation to compare different methods for the quantitative determination of coherence strength of bimetallic components. The strength of the following bimetallic joints was tested: alloy ASM - Armco iron,

Card 1/4

lead-bronze BrS30 - low carbon steel, alloys of type TsAM - Armco iron (with aluminum sublayer), aluminum-lead alloy A20 - Armco iron (with aluminum sublayer). The strength of the specimens was tested by three different methods, viz: shear, slip, and breaking strength. The shear strength was determined according to the scheme shown in Fig. 1

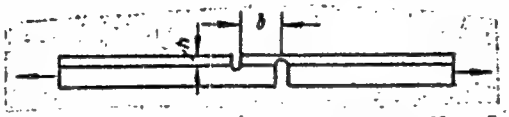


Fig. 1. Specimen for testing of joint strength of bimetallic components (test for shear during tension). b - distance between slots; h - thickness of iron.

and was calculated according to the expression

$$\tau_{f\ shear} = \frac{P_{max}}{F}\ Mn/m^2(kg/mm^2)$$

$$F = ab,$$

where $\tau_{f\ shear}$ is the shear strength, P_{max} the maximum applied force, a - the width of the specimen, and b - the distance between the markings. The slip strength was determined on a suitably modified R-5 machine. A schematic of the installation

is presented. The breaking strength was determined according to the scheme shown in Fig. 2.

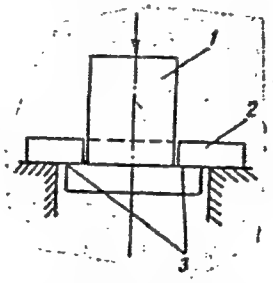


Fig. 2. Schematic for the breaking strength test. 1 - plunger, 2 - specimen; 3 - ring, along which the break occurs.

The experimental results are presented graphically (see Fig. 3). It is concluded that the measurement of slip strength affords the most sensitive test for determining the strength of bimetallic joints.

L 24429-66
ACC NR: AT6006483

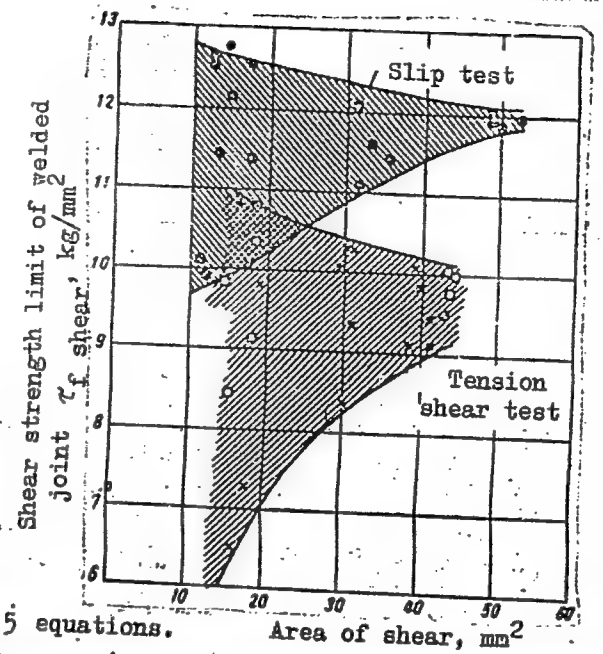


Fig. 3. Results from tests of bimetallic joint strength of iron - TsAM48-2. Open circles - b/h const (different specimens width); crosses - specimens of constant width.

Orig. art. has: 1 table, 7 graphs and 5 equations.

Card 4/4 ddc SUB CODE: 11/ SUBM DATE: none/ ORIG REF: 005/ OTH REF: 002

S/137/62/000/006/159/163
A057/A101

AUTHOR: Shpagin, B. V.

TITLE: Weldability and welding technology of magnesium alloys

PERIODICAL: Referativnyy zhurnal, Metallurgiya, no. 6, 1962, 8, abstract 6E48 (V sb. "Svarka tsvetn. met. i splavov". Moscow, Oborongiz, 1961, 30 - 71)

TEXT: The following questions were discussed: peculiarities of welding of Mg-alloys, protection of Mg during the welding, reduction of the metal weld seam, difficulties during welding of Mg-alloys, the general characteristic of the weldability of alloys of various systems (Mg-Mn, Mg-Al-Zn, Mg-Zn-Zr, Mn-Zr-rare earth metals), the tendency of the alloys for crack formation during welding, mechanical properties and structure of weld joints of Mg-alloys, the effect of some technological factors on the strength of the weld joint of deformable alloys, fluxes and coatings for welding of Mg-alloys, the welding technology for deformable Mg-alloys and casts in removal of defects (protective gases used and sources of current supply, preparation of the details for the welding, selection of the addi-

Card 1/2

tion material and welding conditions, technique and technology of welding parts and casts, control and correction of defects).

V. Tarisova

[Abstracter's note: Complete translation]

Card 2/2

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1 2300

S/860/61/000/000/006/020
A006/A101

AUTHOR: Shpagin, B. V.

TITLE: Wire for the automatic welding of special steels

SOURCE: Sbornik izobreteniy: svarochnaya tekhnika. Kom. po delam izobr. i otkrytiy. Moscow, Tsentr. byuro tekhn. inform. 1961, 118 (Author's Certificate no. 106693, cl. 21h, 30_{16}; no. 561322 of November 24, 1956)

TEXT: The following two compositions are proposed: 1) carbon 0.12%, manganese 1.00%, silicon 0.70%, chromium 0.20%, nickel 1.25%, molybdenum 0.50%, vanadium 0.25%, titanium 0.15%, aluminum 0.05%, sulfur $\leq$ 0.025%, phosphorus $\leq$ 0.030%, the rest iron 2) carbon 0.18%, manganese 0.70%, silicon 0.20%, chromium 0.80%, nickel 0.90%. The other elements are taken in the same percentages as in composition 1). These compositions assure mechanical properties of the welds in 30 ХГСНА (30KhGSNA) steel, 25 - 30 mm thick, welded with АН -348 (AN-348A) flux, which approach values obtained in manually produced electric arc welded joints made with ВИ-10-6 (VI-10-6) electrodes. The welds are not crack--sensitive. The described wire can be used to weld medium and thick structural

Card 1/2

Wire for the automatic welding of special steels S/860/61/000/000/005/020
A006/A101

steels. The strength of weld joints is not below 90 kg/mm^2 and toughness not below 6.0 kg/cm^2.

Card 2/2

L 58896-65 EPR/EWP(t)/EWP(b) Ps-4 IJP(c) JD/TCH/JT

ACCESSION NR: AP5019050 UR/0286/65/000/012/0077/0077
669.721.5

AUTHOR: Kovalev, I. G.; Mikheyev, I. M.; Dolgov, V. V.; Shpagin, B. V.; Mishkin, V. L.

TITLE: High-strength magnesium alloy. Class 40, No. 172050

SOURCE: Byulleten' izobreteniy i tovarnykh znakov, no. 12, 1965, 77

TOPIC TAGS: magnesium alloy, high strength alloy, high strength magnesium alloy, magnesium weldable alloy

ABSTRACT: This Author Certificate introduces a high-strength magnesium alloy containing zinc, cadmium, and zirconium. In order to improve mechanical properties and weldability, the alloy contains 2—4% zinc, 1—2% cadmium, 0.3—1% zirconium, 0.5—2% lanthanum, and the remainder is magnesium. [WW]

ASSOCIATION: Organizatsiya gosudarstvennogo komiteta po aviatsionnoy tekhnike SSSR (Organization of the State Committee on Aviation Engineering, SSSR)

SUBMITTED: 030ct63 ENCL: 00 SUB CODE: MM, MS
NO REF SOV: 000 OTHER: 000 ATD PRESS: 4051

Card 1/1

20791

S/181/61/003/003/017/030
B102/B205

AUTHORS: Aronenko, V. N., Tikhinskiy, G. F., Finkel', V. A., Zhazha, V. I., Shpacin, I. V.

TITLE: Plastic deformation of textured beryllium

PERIODICAL: Fizika tverdogo tela, v. 3, no. 3, 1961, 796-802

TEXT: Single crystals of beryllium show highly anisotropic mechanical properties on account of their hexagonal crystal structure. A study has now been made of the mechanical properties of high-purity beryllium foils. For this purpose, thin textured Be foils of high purity (99.98% without taking hydrogen into account) were prepared by condensation of beryllium vapor on molybdenum sheet in a vacuum of 1.10^{-6} mm Hg. The rate of evaporation was 0.2 g/cm^2·hr, the condensation temperature was 300-320°C, and the temperature of heat treatment was 700°C for one hr. These conditions were the same for all specimens. The purity was checked by a determination of the resistivity ratio: $R_{4.2°K}/R_{293°K} = 9.10^{-3} - 1.5.10^{-2}$. The grain size varied from 7 to 15 μ, the foils had a thickness of 170-300 μ, and the density was

Card 1/3

Plastic deformation ...

1.831 g/cm^3. The texture was studied by X-ray analysis using a tube designed by F. N. Rhines and V. S. Kogan. Two different textures (I and II) were studied. Texture I of the Be foil showed no relationship with that of the molybdenum backing which had been carbidized. The X-ray diagrams showed no (002) line, i.e., an axisymmetric texture with the axis [001] (perpendicular to the surface of the foil) could be assumed. Texture II showed "interaction" of the condensate of hexagonal beryllium with the backing (body-centered cubic Mo) with the texture (100) [011] . On account of this "interaction", the basal plane (002) was orientated at an angle of 4.5° toward the surface of the foil, which resulted in a shift of the interference points. The plastic deformation (rate: 1% per min) was studied at 20-700°C. The temperature was measured by means of a Pt-PtRh thermocouple (accuracy: ±2°). The specimens had a size of 50 x 4 x (0.17-0.3) mm. Three kinds of specimens with different directions of the texture relative to the direction of expansion were studied. Type I: The basal plane coincided with the plane of the specimen. The temperature dependence of the breaking point φ_b of the longitudinal expansion δ and of the lateral contraction ψ was measured (Fig. 4). The maximum value of φ_b at room tem-

Plastic deformation ...

perature was 43 kg/mm^2. increased monotonically from 11% at room temperature to 77% at 600°C. These specimens showed a three-dimensional plasticity. X-ray analysis disclosed effects of prismatic sliding in the entire range of temperatures (20-800°C). Type II: The basal plane formed an angle of 45° with the plane of the specimen. It showed practically the same temperature dependence of σ'_b; at room temperature σ'_b = 44 kg/mm^2 and δ = 18.5% (somewhat higher than in the case of I). These specimens exhibited a two-dimensional plasticity. The temperature-dependent variations in width and thickness are illustrated in Fig. 5. The two types show different rupture. Type III: The same texture as II but expansion in the direction [010]. These specimens showed a particularly low strength; at room temperature, there is practically no longitudinal expansion. X-ray diagrams showed no variations. Only at 200°C they showed an insignificant shift of the intensity maxima. Maximum δ appeared at 550°C (26.5%). The behavior of these specimens on expansion in one direction perpendicular to the plane of a prism of type II is similar to Be single crystals. I. A. Gindin and V. S. Fogan are thanked for a duscussion. There are 6 figures and 16 references: 11 Soviet-bloc and 5 non-Soviet-bloc.

ASSOCIATION: Physico Tech. Inst. AS Ukr. SSR, Khar'kov

Card 3/3

33453
S/126/61/012/006/010/023
E021/E435

18 7500 1418
21, 2100

AUTHORS: Amonenko, V.M., Ivanov, V.Ye., Tikhinskiy, G.F., Finkel', V.A., Shpagin, I.V.

TITLE: The high temperature polymorphism of beryllium

PERIODICAL: Fizika metallov i metallovedeniye, v.12, no.6, 1961, 865-872

TEXT: Measurements of the electrical conductivity of beryllium were carried out on specimens in the form of plates about 0.3 mm thick, prepared by condensing beryllium vapour on molybdenum sheet at 300°C and 2 x 10^{-6} mm Hg pressure. The beryllium was of purity 99.96 to 99.97% (total metallic impurities 0.01%, oxygen content 0.01% and carbon content less than 0.02%). The density of the beryllium was 1833 g/cm^3. The plates had axial symmetry with the [001] axis perpendicular to the surface. Electric resistance measurements were carried out in the range 18 to 1280°C, in an atmosphere of purified helium above 900°C. Fig.1 shows the relation between temperature and relative electrical resistance of beryllium. Curve 1 is for 99.97% beryllium and shows a continuous smooth increase with increase in

temperature. Curve 2 is for 98% beryllium. This shows the effect of impurities in the region 200 to 800°C. Curve 3 is for 99.97% beryllium after 10% deformation and annealing at 900°C for 1.5 h, and shows the effect of residual stresses which are difficult to eliminate. At 1254 ± 5°C the electrical resistance increases rapidly, due to a polymorphic transformation. Samples similar to those used for electrical resistance measurements but no less than 0.5 mm thick were investigated by X-ray analysis. The results showed that there was a transformation at 1254 ± 5°C from the hexagonal α-Be lattice to the body-centred cubic β-Be lattice with the parameter a = 2.5464 kX. The transformation was accompanied by a decrease in specific volume.

Acknowledgments are expressed to M.I.Kaganov and V.S.Kogan for discussions and to S.F.Kovtun for supplying the vanadium used in the anodes. There are 7 figures and 18 references: 8 Soviet-bloc and 10 non-Soviet-bloc. The four most recent references to English language publications read as follows: Ref.4: Kaufmann A.R., Gordon P., Lillie D.W. Trans. ASM, v.42, 1950, 785. Ref.6: Sidchu S.S., Henry C.O. J. Appl. Phys., v.21, (10), 1950,

The high temperature ...

1036; Ref.7: Seybolt A., Lukesh I., White D. J. Appl. Phys., v.22, 1951, 986; Ref.11: Martin A.J., Moore A.J. Less-Common Met., v.1, (2), 1959, 85.

ASSOCIATION: Fiziko-tekhnicheskiy institut AN UkrSSR
(Physicotechnical Institute AS UkrSSR)

SUBMITTED: April 19, 1961

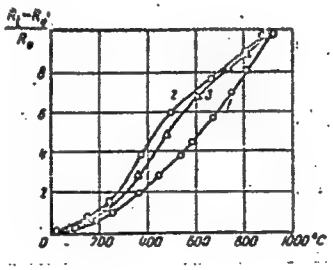


Fig.1.

Card 3/3

SHPAGIN, M.(Moskva); KULIKOV,G.(Moskva)

The brightest projector. Izobr.i rats. no.11:22-23 N '62. (MIRA 15:12)
(Technological innovations)

SHPAGIN, M.(Moskva)

"Komsomolets" designed by members of the Communist Youth League. Izobr. i rats. no.7:5-7 Jl '62. (MIRA 16:3)
(Potato digger (Machine))

SHPAGIN, M.

Paint against dust. Izobr. i rats. no.7:15-16 '63. (MIRA 16:9)
(Paint)

SHPAGIN, R.

Accessible to every club. Voen. Znan. 41 no.5:45 My '65. (MIRA 18:5)

SHPAGIN, S. G.

USSR/ Electronics - Telegraph automation

Card 1/1 Pub. 133 - 9/21

Authors : Shpagin, S. G.

Title : Automation of telegraph communications in a telegraph station in Stalin

Periodical : Vest. svyazi 3, 18-20, Mar 1955

Abstract : The first experiment in introducing the SRP-20 commutator unit designed for automatic transreception of telegrams, is discussed. Problems encountered in its operation are emphasized, and technical data is given regarding its construction and methods of application. Illustrations; diagrams.

Institution : .....

Submitted : .....

SHPAGIN, V.

PA 190T104

USSR/Radio - Television Jun 51
Amplifiers, Wide-Band

"Obtaining Greater Amplification in Wide-Band Amplifiers," V. Shpagin

"Radio" No 6, pp 44, 45

Wide band-pass of television receivers reduces their amplification and makes more stages necessary. Shows how amplification can be increased by decreasing the capacitance. The latter is accomplished in 2 ways: (1) by using magnetite core instead of trimmer capacitor for tuning; (2) by connecting the out capacitance of the 1st tube and the in capacitance of the 2d tube effectively in series.

190T104

SHPAGIN, V.
APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R001549920009-2

Power of socialist competition. Sov. profsoiuzy 7 no.6:9-11 Mr Mr '59. (MIRA 12:6)

1. Predsedatel' ob"yedinennoge postroykoma stroitel'stva Bratskoy gidroelektrostantsii.
(Bratsk District--Construction workers)

SHPAGIN, V.

A word from the constructors of the Bratsk Hydroelectric Power Station. Sov. profsoiuzy 7 no.14:12 Jl '59. (MIRA 12:10)

1.Predsedatel' ob"yedinennogo postroykoma Bratskgesstroya. (Bratsk Hydroelectric Power Station)

ALEKSEYEV, A.; RESHETNYAK, I.; SHPAGIN, V.; SUROVETSKIY, Ye.; DAVYDOV, I., (Baku); KRASNOV, A. (Al'met'yevsk); SAVEL'YEV, G.; RAZVOROTNEV, A.; KOZLOV, A., inzh.; TURUTIN, I.; VALIOTTI, B. (Arkhangel'sk); VEL'MITSKIY, V.

Letters to the editor. Sov.profsoiuzy 16 no.6:47-52 Mr '60. (MIRA 13:3)

1. Starshiy instruktor Chuvashskogo oblsovprofa (for Alekseyev). 2. Chlen kraykoma profsoyuza rabotnikov svyazi, rabochikh avtomobil'nogo transporta i shosseynykh dorog, g.Maykop (for Reshetnyak). 3. Predsedatel' ob"yedinennogo postroykoma Bratskgesstroya (for Shpagin). 4. Starshiy instruktor Yakutskogo oblastnogo soveta profsoyuzov (for Surovetskiy). 5. Predsedatel' komissii obshchestvennogo kontrolya za rabotoy torga, Arkhangel'sk (for Savel'yev). 6. Sekretar' partbyuro tresta "Ukhtastroy," g.Ukhta, Komi ASSR (for Razvorotnev). 7. Redaktor mnogotirazhnoy gazety "Zhilstroyevets" (for Turutin).

(Labor and laboring classes) (Trade unions)

SHPAGIN, V.

Under the new conditions. Sov.profsoiuzy 16 no.12:27-28 Je '60. (MIRA 13:6)

1. Predsedatel' ob"yedinennogo postroykoma profsoyuza stroitel'stva Bratskoy gidroelektricheskoy stantsii.
(Hours of labor)
(Bratsk Hydroelectric Power Station)

ZINOV'YEVA, I.S.; SHERSHACHEVA, L.I.; IZRAILEVA, L.M.; SHPAGINA, M.K.

Drug resistance of dysentery bacilli. Antibiotiki 4 no.6:88-92 N-D '59. (MIRA 13:3)

1. Kuybyshevskiy institut epidemiologii, mikrobiologii i gigiyeny.
(SHIGELLA pharmacol.)
(ANTIBIOTICS pharmacol.)

ZINOV'YEVA, I.S.; SHPAGINA, M.K.

Bacteriological characteristics of acute gastroenteritis in Kuybyshev. Zhur. mikrobiol. epid. i immun. 31 no. 5:97-98 My '60. (MIRA 13:10)

1. Iz Kuybyshevskogo epidemiologii, mikrobiologii i gigiyeny.
(KUYBYSHEV—GASTROENTERITIS)

ZINOV'YEVA, I.S.; SHPAGINA, M.K.

Data on the characteristics of some methods of transmitting of dysentery in Kuybyshev. Gig. i san. 26 no.5:69-70 My '61. (MIRA 15:4)

1. Iz Kuybyshevskogo instituta epidemiologii, mikrobiologii i gigiyeny.

(DYSENTERY)

ZINOV'YEVA, I.S.; SHPAGINA, M.K.

Source and ways of dissemination of Salmonella infection in Kuybyshev. Zhur. mikrobiol., epid. i immun. 33 no.1:98 Ja '62. (MIRA 15:3)

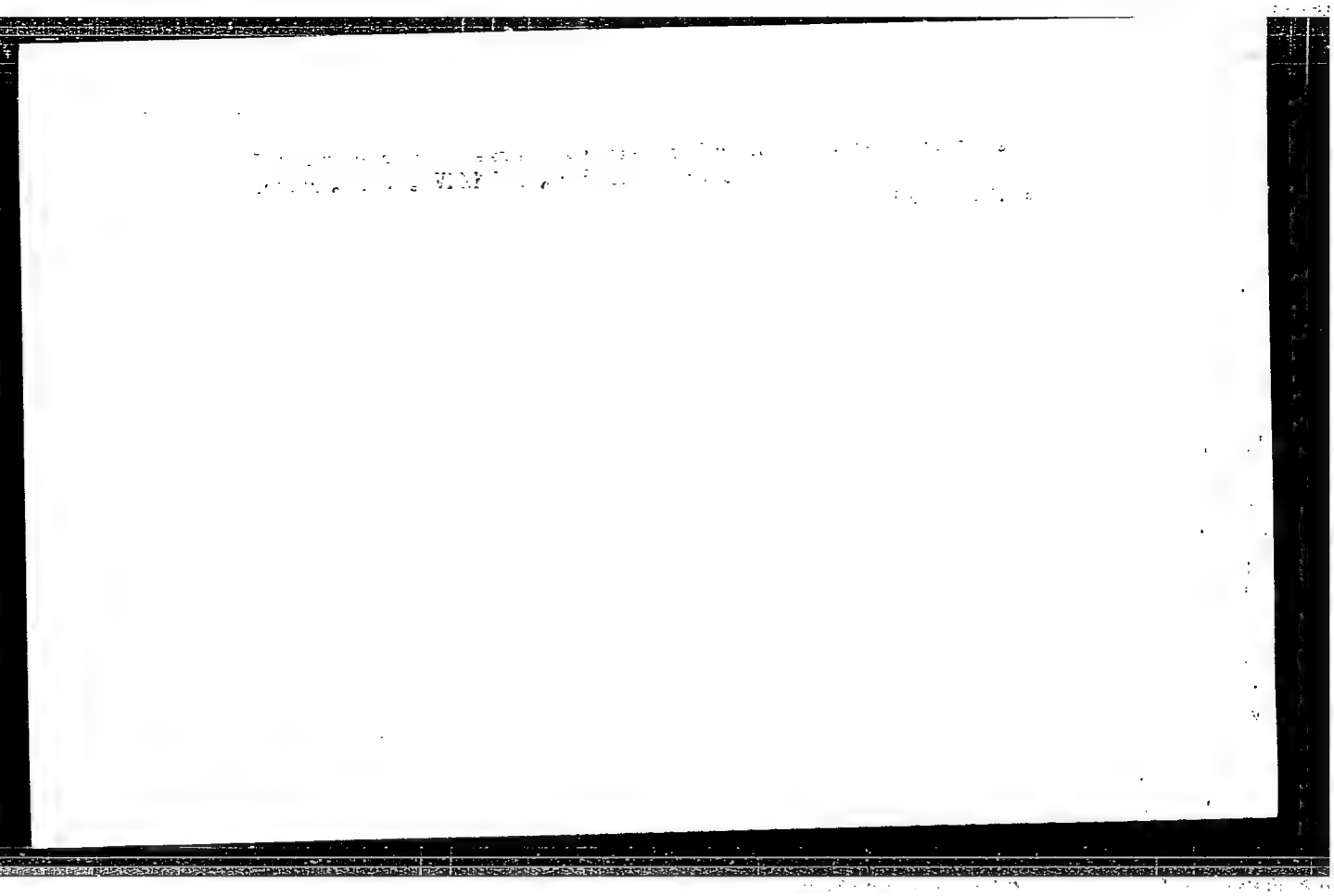
1. Iz Kuybyshevskogo instituta epidemiologii, mikrobiologii i gigiyeny.

(KUYBYSHEV--SALMONELLA)

SYTINSKAYA, N.; SUSLOV, A.; SHPAGINA, T.; ORLOVA, N.S.; POLOZHENTSEV, D.D.

Preliminary results of observations of the total solar eclipse of February 25, 1952, carried out by the expedition of the Leningrad University. Astron. tsir. no.136:10-13 Mr '53. (MLRA 6:6)

1. Leningradskiy universitet. (Eclipses, Solar--1952)



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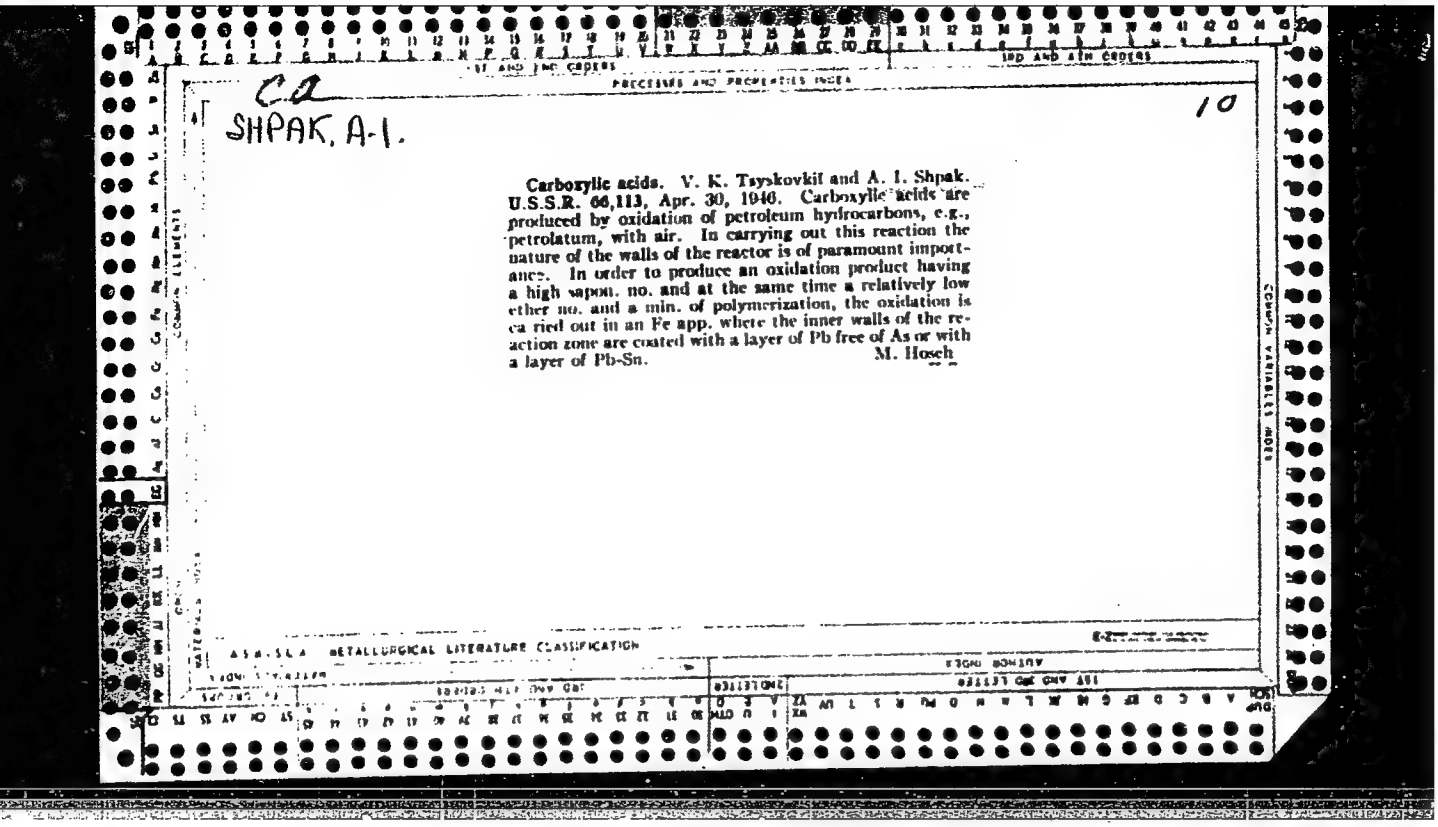


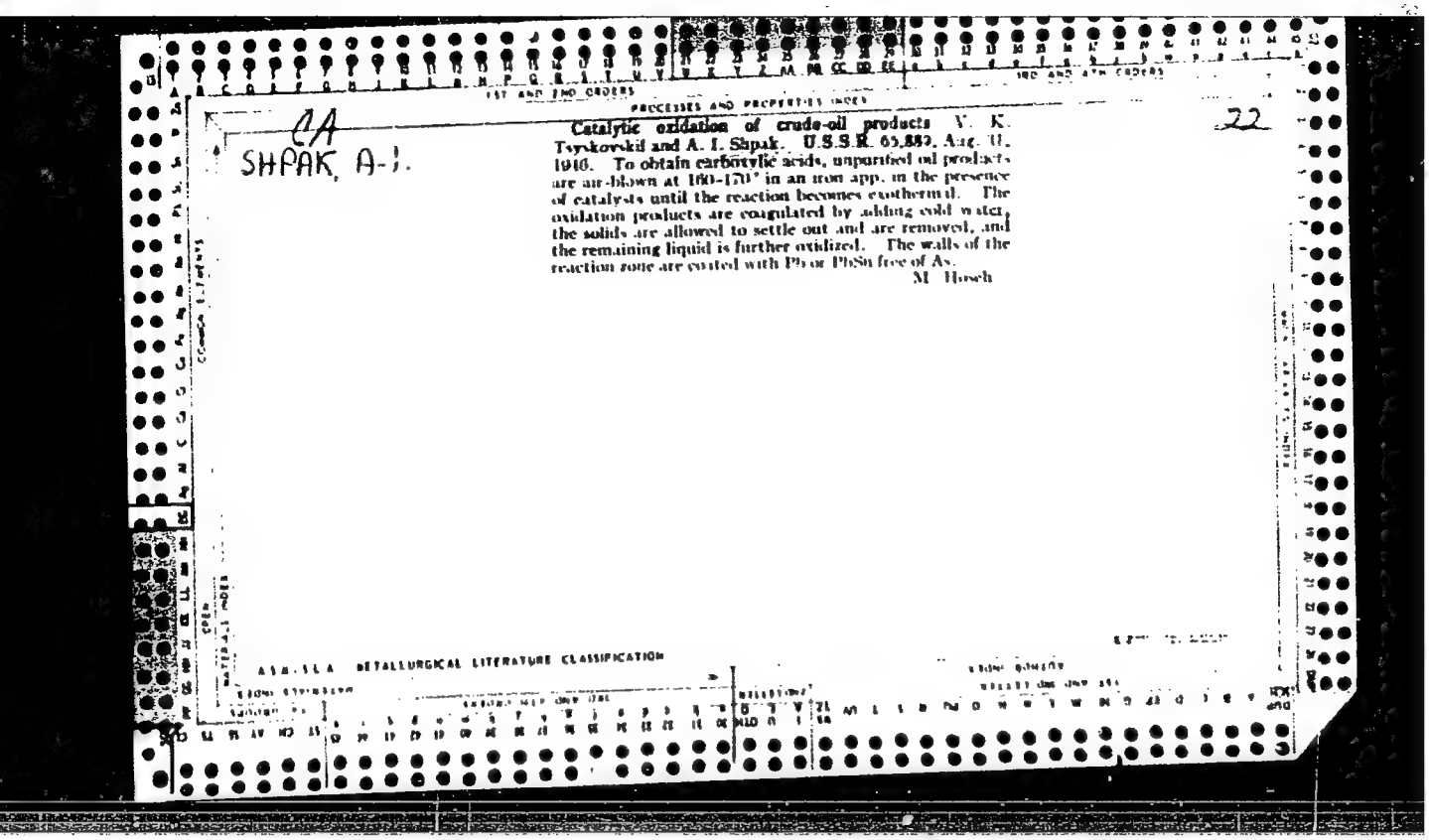
CA

SHPAK, A-I.

10

Carboxylic acids. V. K. Tsyskovkii and A. I. Shpak. U.S.S.R. 60,113, Apr. 30, 1946. Carboxylic acids are produced by oxidation of petroleum hydrocarbons, e.g., petrolatum, with air. In carrying out this reaction the nature of the walls of the reactor is of paramount importance. In order to produce an oxidation product having a high sapon. no. and at the same time a relatively low ether no. and a min. of polymerization, the oxidation is carried out in an Fe app. where the inner walls of the reaction zone are coated with a layer of Pb free of As or with a layer of Pb-Sn.

M. Hosch



CA

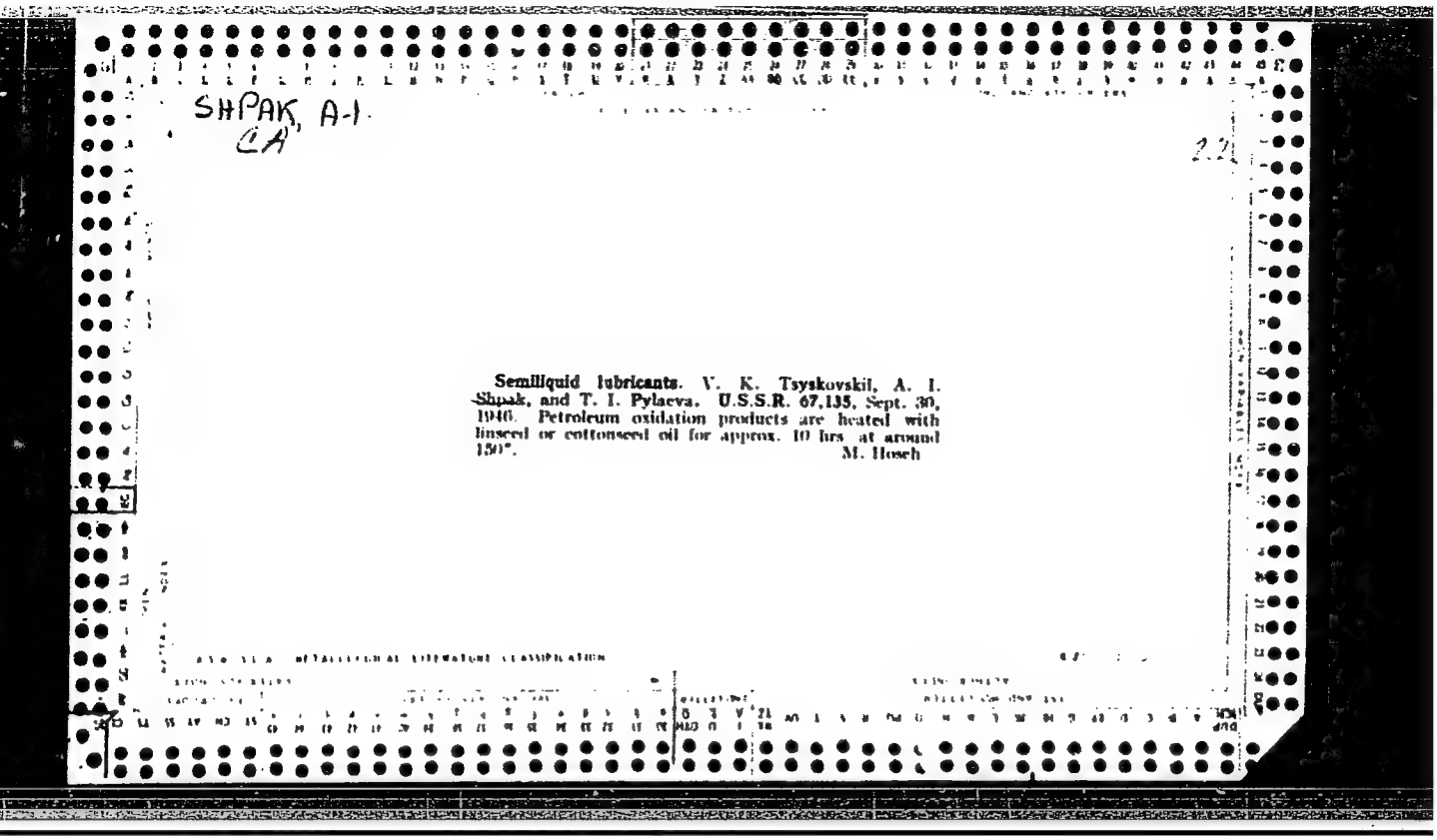
SHPAK, A-I.

22

Catalytic oxidation of crude-oil products. V. K. Tsyskovskii and A. I. Shpak. U.S.S.R. 65,882, Aug. 31, 1946. To obtain carboxylic acids, unpurified oil products are air-blown at 160–170° in an iron app. in the presence of catalysts until the reaction becomes exothermal. The oxidation products are coagulated by adding cold water, the solids are allowed to settle out and are removed, and the remaining liquid is further oxidized. The walls of the reaction zone are coated with Pb or PbSn free of As.

M. Hosch

A54-11A METALLURGICAL LITERATURE CLASSIFICATION



SHPAK, A-1.
CA

22

Semiliquid lubricants. V. K. Tsyskovskii, A. I. Shpak, and T. I. Pylaeva. U.S.S.R. 67,135, Sept. 30, 1946. Petroleum oxidation products are heated with linseed or cottonseed oil for approx. 10 hrs. at around 150°.

M. Hosch

SHPAK, A.I.

LARIONOV, A.S.; SHPAK, A.I. (Saratov)

Apparatus for the cracking of petroleum products, dehydration and dehydrogenation of ethanol and destructive distillation. Khim. v shkole. no.2:49-51 Mr-Ap '58. (MIRA 11:3)
(Chemical apparatus) (Ethyl alcohol) (Distillation, Destructive)

SHPAK, A. (g. Saratov)

Reaction of N.N. Zinin in the vapor phase. Khim. v shkole 14 no.1:88 Ja-F '59. (MIRA 12:2)
(Chemistry--Experiments)

SHPAK, A.M.

Retention and reproduction of specialized terminology. Vop. psikhol. 9 no.5:147-151 S-O'63. (MIRA 17:2)

1. Kafedra inostrannykh yazykov meditsinskogo instituta, Vinnitsa.

SHPAK, Aleksandr Nikolayevich; BRAYLOVSKIY, N.G., inzhener, redaktor; VERINA, G.P., tekhnicheskiy redaktor

[New types of freight cars] Novye tipy gruzovykh vagonov. Moskva, Gos. transportnoe zhel-dor. izk-vo, 1955. 130 p. (MLRA 8:6)
(Railroads--Freight cars)

SHPAK, Aleksandr Nikolayevich; BRAYLOVSKIY, N.G., redaktor; BOBROVA, Ye.N., tekhnicheskiy redaktor

[New truck for freight cars] Novaia telezhka gruzovykh vagonov. Moskva, Gos. transp. zhel-dor. izd-vo, 1957. 27 p. (MIRA 10:4)
(Railroads--Freight cars) (Wheels)

SHPAK, Aleksandr Nikolayevich; BRAYLOVSKIY, M.G., inzh.red.; KHITROV, P.A., tekhn.red.

[Foreign railroad cars] Vagony zarubezhnykh zheleznykh dorog. Moskva, Gos. transp.zhel-dor. izd-vo, 1957. 239 p. (MIRA 11:3)
(Railroads--Cars)

SHPAK, A.N., inzh.

New type of heavy-duty freight car. Zhel. dor. transp. 40 no.9: 87-89 S '58. (MIRA 11:10)
(Railroads--Freight cars)

SHPAK, A.N.

Use of plastics in railroad equipment abroad. Biul.tekh.-ekon. no.8:89-93 '59. (MIRA 13:1)
(Railroads--Equipment and supplies)
(Plastics)

SHPAK, A.N.

New system for suspension and driving of generators in passenger railroad cars made of metal. Biul.tekh.-ekon.inform. no.12: 62-63 '59. (MIRA 13:4)
(Railroads--Electric equipment)

SHPAK, A.N.

Automatic charging equipment for storage batteries of railroad cars. Biul.tekh.-ekon.inform. no.1:72-73 '60.
(MIRA 13:5)

(Railroads--Electric equipment)

SHPAK, A.N.

Freight cars in the U.S.A. Biul.tekh.-ekon.inform. no.4:91-96 '60.
(MIRA 13:11)

(United States—Railroads—Freight cars)

SHPAK, A.N., inzh.

Railroad equipment at the International Fair in Leipzig. Zhel. dor. transp. 46 no.8:85 Ag '64.
(MIRA 17:11)

SHPAK, A. Ye.: Master Med Sci (diss) -- "The qualitative state of the breast milk of mothers and the development of newborn children". Mukachevo, 1958. 14 pp (Kiev Order of Labor Red Banner Med Inst im Acad A. A. Bogomolets), 200 copies (KL, No 6, 1959, 147)

ACC NR: AP6025607 SOURCE CODE: UR/0413/66/000/013/0049/0049

INVENTORS: Aksenov, B. Ye.; Shpak, B. I.; Mol'nikov, A. Ya.

ORG: none

TITLE: A device for burning holes in aircraft blades. Class 21, No. 183297

SOURCE: Izobreteniya, promyshlennyye obraztsy, tovarnyye znaki, no. 13, 1966, 49

TOPIC TAGS: aircraft propeller, electric equipment, electric device, flaw detection

ABSTRACT: This Author Certificate presents a device for burning holes in aircraft propeller blades. The equipment consists of a holder with electric cables fixed to it and of electric needles fixed in its body. To locate hidden holes in the rubber coating and to burn them through, two needle-like pinches are fixed to the body. These pinches enter the previously located holes in the propeller, while the electric needle is placed at a desired distance from them.

SUB CODE: 13/ SUBM DATE: 30Jun64

Card 1/1 UDC: 621.365 629.13.01/06

S/073/62/028/009/008/011
A057/A126

AUTHORS: Zharovskiy, F. G., Shpak, E. A., Piskunova, E. V.

TITLE: Extractive and photometric determination of titanium by means of N-benzoylphenylhydroxylamine

PERIODICAL: Ukrainskiy khimicheskiy zhurnal, v. 28, no. 9, 1962, 1104 - 1106

TEXT: A photometric determination of titanium in the presence of zirconium is described. The method is based on the formation of a complex with N-benzoyl-phenylhydroxylamine (befgidron) and extraction of the complex with chloroform. The complex of titanium with N-benzoyl-phenylhydroxylamine obtained at pH = 1 has a molar ratio of the components of 1 : 2 (i.e. apparently $TiO(C_{13}H_{10}O_2N)_2$) and, extracted with chloroform from a 2 N HCl solution, a ratio of 1 : 4 corresponding to the formula $Ti(C_{13}H_{10}O_2N)_4$. Absorption spectra of the reagent and of the titanium or zirconium complexes were investigated and the molar extinction coefficient of the titanium complex determined with $\lambda_{355} = 5,200$. Qualitative experiments showed that chloroform solutions of corresponding complexes of aluminum, tin, antimony, tantalum, and tungsten reveal no absorption of light in the

Card 1/2

ZHAROVSKIY, F.G.; SHPAK, E.A.; PISKUNOVA, E.V.

Conditions for the formation and extraction of benzoylphenyl hydroxamate. Ukr.khim.zhur. 29 no.1:102-103 '63. (MIRA 16:5)

1. Kiyevskiy gosudarstvennyy universitet im. T.G.Shevchenko.
(Hydroxamic acid)

PILIPENKO, A.T.; [illegible], E.A.; [illegible]

Chemico-analytical properties of N-furoylphenylhydroxylamine. Ukr. khim. zhur. 29 no.11:1209-1214 '63. (MIRA 16:12)

1. Kiyevskiy gosudarstvennyy universitet im. T.G. Shevchenko.

PILIPENKO, A.T.; SHPAK, E.A.; BOYKO, Yu.P.

Determination of titanium in steels ores, and aluminum alloys by means of N-furoylphenylhydroxylamine. Zav. lab. 31 no.2:151-154 '65.
(MIRA 18:7)

1. Kiyevskiy gosudarstvennyy universitet im. T.G.Shevchenko.

SHPAK, G.S.

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Špak, G. S. On some estimates for the argument of an analytic function. Doklady Akad. Nauk SSSR (N.S.) 92, 711–713 (1953). (Russian)

Let N denote the class of functions $f(z)=b_0+b_1z+\cdots$, regular and zero-free in $|z|<1$, with given b_0 and b_1. Let $\alpha=\arg b_0$, $-\pi<\alpha\leqq\pi$, and let $\arg f(z)$ be defined by continuity from this. The author proves that $\sup|\arg f(z)|\geqq\rho_0$, where ρ_0 is the largest root of

$$\tfrac{1}{2}\pi\rho_0^{-1}|b_1/b_0|=\cos(\tfrac{1}{2}\pi\alpha/\rho_0),$$

with equality possible for an explicitly given $f(z)$. Proof: let ρ (assumed finite) be the maximum of $|\arg f(z)|$ ($f(z)$ not constant). Then $\phi(z)=|f(z)/|b_0|\,|^{\pi/\rho}$ has $|\arg\phi(z)|<\pi/2$ and can be written in the form $\{1+\omega(z)\}/\{1-\omega(z)\}$, with $|\omega(z)|<1$. Known inequalities for the coefficients of bounded functions then lead to the result. In particular, $\sup|\arg f(z)|\geqq\frac{1}{2}\pi|b_1/b_0|$. It follows further that

$$\sup\arg f(z)-\inf\arg f(z)\geqq\tfrac{1}{2}\pi|b_1/b_0|,$$

with equality possible. *R. P. Boas, Jr.* (Evanston, Ill.).

16(1)

AUTHOR: Shpak, G.S. SOV/140-59-1-23/25

TITLE: On a Covering Theorem in the Function Theory (Ob odnoy teoreme o pokrytii v teorii funktsiy)

PERIODICAL: Izvestiya vysshikh uchebnykh zavedeniy. Matematika, 1959, Nr 1, pp 218-223 (USSR)

ABSTRACT: The author joins older investigations of Landau [Ref 3] and proves some partly well-known theorems on the coverings; e.g.: Theorem: If the analytic function $f(z)$ is regular in $|z|<1$, if it has a majorant $\Phi(z) = A_0+A_1z+\ldots, |z|<1$, and if $f(0)=b_0=A_0$, $f'(0)=b_1$, then its range of values for $|z|<1$ covers a domain G_r, where $r=e^{-x}$ and x is the positive root of $\frac{x}{\operatorname{sh} x} = \frac{b_1}{A_1}$. Here G_r is the range of values of the majorant for $|z|<r$.
There are 3 references, 1 of which is Soviet, and 2 German.

ASSOCIATION: Khar'kovskiy aviatsionnyy institut (Khar'kov Aviation Institute)

SUBMITTED: January 20, 1958

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S/147/59/000/04/020/020
E031/E415

AUTHOR: Zolotukhin, V.K.

TITLE: The Scientific-Technical Conference at Khar'kov Aviation Institute

PERIODICAL: Izvestiya vysshikh uchebnykh zavedeniy, Aviatsionnaya tekhnika, 1959, Nr 4, pp 161-165 (USSR)

ABSTRACT: In May 1959, the 16th Conference of Professorial and Teaching Staff took place.

Mathematics and Mechanics Section. The following papers were read: "A Spectral Representation of the Theory of Axisymmetric Turbulence" by Candidate of Physical and Mathematical Sciences G.M.Taranova; "Some Evaluations for Functions with Positive Real Parts" by Assistant G.S.Shpak; "Existence, Uniqueness and Correctness Theorems for Mixed Systems of Functional Equations" by Docent, Candidate of Physical and Mathematical Sciences M.N.Tikhov; "On the Application of Boll and Chebyshev Points to the Solution of Some Problems in the Synthesis of Four Bar Linkages" by Docent, Candidate of Physical and Mathematical Sciences Ya.L.Geronimus; "The Influence of the Structural Properties of Functions on the Convergence Almost Everywhere of their Conjugate Fourier Series" by Docent, Candidate of Physical and Mathematical Sciences B.L.Golinskiy.

General Technological Section. The following papers were read: "The Relation Between the Compton Length of Waves, the Length of de Broglie Waves and the Acceleration Potential for High Energy Particles" by Docent, Candidate of Physical and Mathematical Sciences I.Ya.Mints; "The Problem of Determining the Heat Transfer Coefficient of Conductors" by Senior Instructor P.P.Bezuglov; "An Electron-Graphical Method of Investigating the Structure of Matter" by Assistant I.Ya.Surovtsev; "On the Results of the VIII th Mendeleyev Congress of Chemists of the USSR" by Docent, Candidate of Chemical Sciences E.I.Krech.

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Electrical and Radio Technology Section. The following papers were read: "On the Problem of the Optimum Passage of Transients in an Electric Drive with a Controlling Exciter" by Docent, Candidate of Technical Sciences M.M.Perel'muter; "The Experimental Determination of the Reactances in Synchronous Machines" by Senior Instructor S.V.Khmel'nitskiy; "An Experimental Method of Investigating Electric Fields" by Assistant A.I.Lopatin; "A Discrete Transformer of Current into Code Signals with Magneto-Electric Comparison Units" by Docent, Candidate of Technical Sciences G.M.Butayev; "The Application of Infrared Instruments in Aviation" by Docent, Candidate of Technical Sciences I.D.Artamonov.

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General Engineering Section.

"The Adaptation of a Thermobaric Chamber to the Simulation of the Sinking of a Mine Shaft in Quicksand and Certain Results of Investigations to Determine the Mechanical Characteristics of Sand at Different Temperatures and Humidities" by Docent, Candidate of Technical Sciences S.V.Biyashenko; "Friction and Abrasion in Cermets" by Docent, Candidate of Technical Sciences O.I.Goldayeva; "The Construction of Multi-Satellite Planetary Gears" by Assistant V.A.Tkachenko; "The Influence of Work Hardening on the Fatigue of Threaded Connections" by Assistant V.M.Rydchenko; "Investigation of Cermets Slide Bearings" by Assistant A.S.Efoyan.

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SHPAK, G.S.

Some evaluations for the modulus and real part of pseudopositive functions. Izv.vys.ucheb.zav.; mat. no.6:148-154 '62. (MIRA 15:12)

1. Khar'kovskiy aviatsionnyy institut.
(Functions)

SHPAK, G.S. (Khar'kov)

Method for drawing up estimates for functions taking preset values at fixed points. Izv. vys. ucheb. zav.; mat. no.5:127-136 '64.
(MIRA 17:12)

ARTEMOV, P.G.; SHPAK, G.V.; SIMANKOV, V.V.

Determination of elastic constants E, G, and μ for thermosetting isotropic plastics. Plast.massy no.5:58-59 '62. (MIRA 15:4)
(Plastics--Testing)

S/191/60/000/012/007/016
B020/B066

AUTHORS: Artemov, P. G., Shpak, G. Z., Allik, A. R.

TITLE: Importance of the Surface Layer for the Mechanical Properties of Products Made of the Plastics Monolit No.1 and Voloknit

PERIODICAL: Plasticheskiye massy, 1960, No. 12, pp. 19 - 22

TEXT: The Leningradskiy institut tochnoy mekhaniki i optiki (Leningrad Institute of Precision Mechanics and Optics) in collaboration with the Leningradskiy zavod plasticheskikh mass im. "Komsomol'skoy pravdy" (Leningrad Plant of Plastics imeni "Komsomol'skaya pravda") investigated the importance of the surface layer for the mechanical properties of Monolit No.1 and Voloknit which had been deformed by bending, compression, elongation, and torsion. 60 samples were taken for each test, the surface of which was undamaged and which did not show any deformations due to thermal stresses; their dimensions were exact. In part of the samples the surface layer was removed to a depth of 0.2 - 0.3 mm. Flexural tests were made according to ГОСТ 4648-56

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(GOST 4648-56) (Fig.1,a). In 80 - 90% of the samples, the break did not occur in the middle of the clamped length which may be explained by 1) the inhomogeneity of the material, 2) the effect of the concentrated local stress, and 3) local residual thermal stresses occurring on solidification of the sample. In this connection, the limit of static flexural strength was determined for two sections: in the middle of the clamped length, σ_v, and in the site of fracture, σ'_v. The arithmetical mean values of 12 - 14 repeated determinations of σ_v and σ'_v, as well as the maximum and minimum values of these stresses, are given in Table 1. It may be seen that the decrease of the surface layer affects the strength of samples to a much lower extent when this layer was in the compression zone than when it was in the dilatation zone. By means of these test results, the results of compression and tension tests could be predicted to a great extent. The results obtained for the strength limit represent the mean values of 11-15 tests, and are given in Table 2; also the respective maximum and minimum values are given. They confirm that the effect of a surface layer compression on the compressive strength of

samples is much lower than in their tensile stress. The limit of torsion strength of plastics was determined by means of the method used for metals. The results presented in Tables 1 and 2 show that the surface layer exerts a considerable influence upon the torsion strength of samples. Along with the effect of the surface layer on the strength properties, also its effect on the elasticity constants was determined, i.e., the modulus of elasticity and the modulus of elasticity on torsion. The arithmetical mean values of ten measurements of these quantities, as well as the maximum and minimum values, are given in Table 3. It may be seen from them that the elasticity constants of the samples with the surface layer removed dropped slightly. Engineer G. L. Gayeva, Senior Laboratory Assistant V. V. Simankov, Laboratory Assistant G.F.Gorskaya, and Mechanic V. I. Shumilov took part in the investigations mentioned. There are 4 figures and 3 tables.

SHPAK, G.Z.; ARTEMOV, P.G., sotrudnik

Work of the central laboratory of the Leningrad "Komsol'skaia pravda" Plastic Factory. Zav.lab. 26 no.12:1434-1435 '60.
(MIRA 13:12)

1. Nachal'nik TSentral'noy laboratorii Leningradskogo zavoda plastmass (for Shpak). 2. Leningradskiy elektrotekhnicheskiy institut svyazi imeni Bonch-Bruyevicha (for Artemov).
(Leningrad--Plastics)

S/032/61/027/004/017/028
B103/B201

AUTHORS: Artemov, P. G., Shpak, G. Z., and Simankov, V. V.

TITLE: Problem of determining mechanical properties of synthetics under torsion

PERIODICAL: Zavodskaya laboratoriya, v. 27, no. 4, 1961, 459-461

TEXT: It is pointed out here that the methods serving for the determination of the mechanical properties of metals under torsion, are applicable in the case of synthetics as well. A machine intended for brittle materials has been redesigned for the purpose. The authors were urged to do so considering that standard methods for synthetics were not available. Principles applying to synthetics differ only inconsiderably from such for metals and other substances. The authors, therefore, made use of them to a certain extent in the torsional deformation of synthetics. The fact is stressed that most thermoplastic and thermosetting synthetics employed in machine- and instrument construction exhibit a brittle failure. Machines available at present for the determination of mechanical characteristics in the torsion of materials (Fig. 1) are found to have the

following drawbacks: (1) The guiding and the guided shafts 1 - 2 are not precisely coaxial, which fact causes sample 3 to bend. Additional strains arise as a result, that do not belong to those due to torsional deformation. (2) Pendulum 4, which serves as a counterweight of the torsional moment acting upon the sample, permits the latter to turn through a very large angle, while the torsion angles of the sample, which are to be determined, are very small. This gives rise to a considerable error source when determining small values from the difference of two large values. (3) The moment acting upon the sample is determined from the deviation of the pendulum and of the transmitting mechanism connected therewith. The test results are considerably distorted by the imperfect work of these mechanisms as well as by friction. The centers mentioned in the Association have jointly determined the yield strength τ_B and the modulus G of tangential elasticity for synthetics: Monolith no. 1, fiber plastic, and organic glass. G. F. Gorskaya, laboratory assistant, and V. I. Shumilov, mechanic, took part in the work. To eliminate defects (1) - (3) of the machine, the latter was remodeled in the following manner: sample 3 was connected by means

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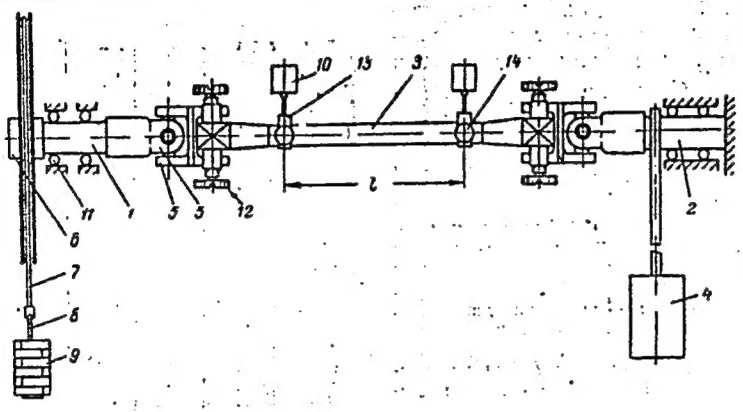
of links to shafts 1 and 2. Defect (1) was thus suppressed. Furthermore, a pulley 6 was mounted on shaft 1 to hold weight 9, hanging from steel band 7. Both the diameter of the pulley and the size of the weight, thus also the magnitude of the moment applied can be predetermined with sufficient accuracy. When measuring the torsion angle φ, shaft 2 was clamped, and the accuracy of results was considerably increased thereby. Angle φ was determined on one length of sample 1 by means of Martens' mirror device [Abstracter's note: not described in the text]. An additional mirror 10 was used for the purpose. To obtain a diagram in coordinates "torsional moment; torsion angle φ," shaft 2 must be tied up and pendulum 4 must be actuated. Samples 120 × 15 × 10 mm GOST 4648-56 (GOST 4648-56) have been tested by the authors. φ was first determined, and thence, G was found. G was rechecked on steel samples (type 40), 5 × 7.5 mm for a control. There are 2 figures and 1 table.

ASSOCIATION: Zavod izdeliy plastmass im. "Komsomol'skoy pravdy" (Factory for Synthetic Products imeni "Komsomol'skaya pravda"); Leningradskiy institut tochnoy mekhaniki i optiki (Leningrad Institute of Precision Mechanics and Optics)

Problem of determining mechanical ...

Legend to Fig. 1: 11) ball bearing, 12) screw, 13) clamp, 14) screw.
For other denotations, see the text.



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[redacted]

[redacted] electromagnetic levator. Svar. proizv. no.7:40 Jl '65.
(MIRA 18:8)

1. Imeni "Dzerzhinskiy".